

## ABSTRACT OF THE DISCLOSURE

According to the present invention, an improved waveguide device utilizes an  
5 advantageously designed optically functional cladding region and an associated modulation  
controller to address design challenges in applications requiring modulation, attenuation, control,  
switching, etc. of optical signals. In accordance with one embodiment of the present invention,  
an electrooptic modulator is provided comprising an optical waveguide, a cladding optically  
coupled to the optical waveguide, an optically functional cladding region defined in at least a  
10 portion of the cladding, and a modulation controller configured to provide a modulating control  
signal to the optically functional cladding region. The modulation controller is configured to  
generate an electric field in the optically functional region in response to a biased modulating RF  
control signal.